

**CASE 3827: Application of TRI-
SERVICE DRILLING COMPANY TO
DIRECTIONALLY DRILL, LEA COUNTY**

Case Number

3827

Application

Transcripts.

Small Exhibits

ETC.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

STATE GEOLOGIST
A. L. PORTER, JR.
SECRETARY - DIRECTOR

August 20, 1968

Re: Case No. 3827
Order No. R-3474
Applicant:
Tri-Service Drilling Company

Mr. A. J. Losee
Attorney at Law
Post Office Box 239
Artesia, New Mexico 88210

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Very truly yours,

A. L. Porter, Jr.
A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC _____
Aztec OCC _____
Other _____

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE No. 3827
Order No. R-3474

APPLICATION OF TRI-SERVICE DRILLING
COMPANY TO DIRECTIONALLY DRILL, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 7, 1968,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 20th day of August, 1968, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Tri-Service Drilling Company, is
the owner and operator of the T. P. State Well No. 1 which has
a surface location in Unit R at a point 2126 feet from the South
line and 1887 feet from the East line of Section 1, Township 16
South, Range 38 East, NMPM, Lea County, New Mexico.

(3) That the subject well was originally drilled by a
predecessor to a total depth of 13,140 feet to test the Devonian
formation but was non-productive.

(4) That the evidence indicates the subject well as originally
drilled cut a fault.

(5) That the applicant's immediate predecessor received
authority to set a whipstock at approximately 10,347 feet in the

-2-

CASE No. 3827

Order No. R-3474

subject well and to directionally drill in an east-northeasterly direction to bottom said well in the Devonian formation at a true vertical depth of approximately 13,000 feet at a point within a radius of 100 feet of a point in Unit Q 2160 feet from the South line and 1250 feet from the East line of said Section 1 in order to avoid cutting the aforesaid fault.

(6) That the applicant's immediate predecessor whipstocked the subject well to a subsurface location approximately 596.5 feet east and 181.5 feet north of said surface location at a true vertical depth of approximately 13,014 feet and encountered a small show of oil.

(7) That the applicant has set a whipstock in the subject well at approximately 10,500 feet and proposes to directionally drill in a southeasterly direction to bottom said well in the Devonian formation at a true vertical depth of approximately 13,000 feet and within a 50-foot radius of a point in Unit R 1826 feet from the South line and 1587 feet from the East line of said Section 1 in order to avoid cutting the aforesaid fault and to attain a favorable position on the structure.

(8) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tri-Service Drilling Company, is hereby authorized to set a whipstock at approximately 10,500 feet in its T. P. State Well No. 1 and directionally drill in a southeasterly direction to bottom said well in the Devonian formation at a true vertical depth of approximately 13,000 feet at a point within a radius of 50 feet of a point in Unit R 1826 feet from the South line and 1587 feet from the East line of Section 1, Township 16 South, Range 38 East, NMPM, Lea County, New Mexico.

(2) That a continuous multi-shot directional survey shall be made of the well bore with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Hobbs District Office of the date and time said survey is to be commenced.

-3-

CASE No. 3827

Order No. R-3474


(3) That Form C-105 shall be filed in accordance with Rule 1105 and the operator shall indicate thereon the true vertical depths in addition to measured depths.


(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary, including the future possible adjustment of the allowable assigned to the well, after notice and hearing.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


GUYTON B. HAYS, Member


A. L. PORTER, Jr., Member & Secretary

esr/

Case 3827

Heard 8-7-68

Rec. 8-8-68.

Grant - Tri - Service Dr. Co.,
permission to deviate their
T. P. Lt. #1 - 2126 (S) 1887 / E line
sec. 1 - 165-38E, Lea Co., to a
bottomed location in the
Devonian formation 1826 (S) +
1587 / E line of sec. 1.
Allow a 50' radius tolerance.
Operator will be drilling toward
the center of his acreage and
will crowd no one else's
lease line.

Trust ~~Dr.~~
An Eastman ~~multistage~~
multistage shot. Directional
survey shall be run and
reported to commission within
15 days following completion
of the well.

EDA

*Dist. I
For approval.*

Tri-Service Drilling Company

FIRST NATIONAL BANK BLDG. P. O. BOX 1785 TELEPHONE MU 4-6641

MIDLAND, TEXAS 79701

M. W. BRANUM, PRESIDENT
CARL NEITHERCUTT, VICE-PRESIDENT
L. E. BRANUM, SECRETARY-TREASURER

July 5, 1968

*Set for hearing
Aug 7, 1968*

Case 3827

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

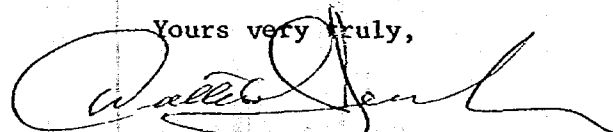
Gentlemen:

Tri-Service Drilling Company assumed operations of the T. P. State well No. 1 located in Unit J, 1887' from the east line and 2164' from the south line, Section 1, T-16-S, R-38-E, Lea County, New Mexico at July 5, 1968. The well had been drilled to a total depth of 13,014' and plugged in conformance with Conservation Commission rules.

Tri-Service plans to re-enter the well and clean out to a depth of approximately 11,570' and deviate the hole to a location approximately 300' east and 300' south of the surface location at an estimated total depth of 13,000'. We propose to commence operations on this well within the next week and understand that we proceed at our own risk.

We respectfully request that this matter be placed on your docket for hearing as soon as possible.

Yours very truly,



WALTER D. JENKINS
Production Superintendent

WDJ/dp

cc: Mr. J. D. Ramey
Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

MAIN OFFICE

68 JUL 8 AM 9 00

DOCKET MAILED

Date 7-26-68

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Case 3827

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

<p align="center">SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)</p>		<p>5a. Indicate Type of Lease State <input checked="" type="checkbox"/> Fee <input type="checkbox"/></p> <p>5. State Oil & Gas Lease No. K-1441</p>
1. <input type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER- Wildcat	7. Unit Agreement Name	
2. Name of Operator Tri-Service Drilling Company	8. Form or Lease Name T. P. State	
3. Address of Operator P. O. Box 1785, Midland, Texas 79701	9. Well No. 1	
4. Location of Well UNIT LETTER J 1887 FEET FROM THE east LINE AND 2164 FEET FROM THE south LINE, SECTION 1 TOWNSHIP 16 south RANGE 38 east NMPM.	10. Field and Pool, or Wildcat Wildcat	
15. Elevation (Show whether DF, RT, GR, etc.) 3715 K.B.	12. County Lea	

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input checked="" type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	OTHER <input type="checkbox"/>	CASING TEST AND CEMENT JOBS <input type="checkbox"/>	OTHER <input type="checkbox"/>

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1703.

Tri-Service Drilling Company assumed operations on the T. P. State No. 1 from the Signal Oil and Gas Company effective 12:00 midnight 7/5/68. The well was plugged by Signal Oil and Gas Company at the following intervals: 13,128'-13,028', 12,321'-12,221', 11,170'-11,070', 8,247'-8,147', 6,410'-6,310' and 4,978'-4,878'; but was not formally plugged through Form C-103. Signal Oil and Gas Company assumed operations from J. C. Williamson on 2/29/68 and whipstocked the well to a location 596.5' east and 181.5' north of the surface location and encountered a small show at a total depth of 13,014'. We plan to re-enter the well and set a whipstock at approximately 11,570' and deviate the hole to a point approximately 300' east and 300' south of the surface location in an attempt to gain structural position and affect a commercial completion. This proposed program has been discussed with Mr. J. D. Ramey of the Hobbs Commission office.

MAIN OFFICE

'68 JUL 8 AM 9 00

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Walter D. Jenkins TITLE Production Superintendent DATE 7/5/68

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

August 7, 1968 - Examiner Hearing

CASE 3803 (Continued and readvertised)

Application of Gulf Oil Corporation for an amendment to Order No. R-3345, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3345, which authorized a waterflood project in its Stuart Langlie Mattix Unit Area, Langlie Mattix Pool, Lea County, New Mexico, to delete the water injection wells previously authorized in Unit M of Section 2, Units A, C, and F of Section 10, and Unit C of Section 11, all in Township 25 South, Range 37 East, and to authorize for water injection four wells at the following unorthodox locations in Section 10: a well 100' from the North line and 1650' from the West line; a well 100' from the North line and 660' from the East line; a well 1315' from the North line and 100' from the West line; and a well 1420' from the South line and 100' from the East line. Applicant also seeks in the amendment authority to convert three additional wells located in Units M and F of said Section 10 and Unit F of said Section 11 to water injection. In the absence of objection, the case will be submitted and an order issued upon the evidence presented in said Case July 10, 1968.

CASE 3826:

Application of Eugene E. Nearburg for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation in the open-hole interval from approximate 7965 feet to 8015 feet in his Magnolia Burt Federal Well No. 1 located in Unit P, Section 5, Township 8 South, Range 30 East, Cato Field, Chaves County, New Mexico.

CASE 3827:

Application of Tri-Service Drilling Company to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its T. P. State Well No. 1 located 1887 feet from the East line and 2126 feet from the South line of Section 1, Township 16 South, Range 38 East, Lea County, New Mexico. Said well was drilled to a total depth of 13,014 feet and has subsequently been whipstocked to a location 596.5 feet east and 181.5 feet north of said surface location. Applicant proposes to set a whipstock at 11,570 feet and directionally drill to a depth of approximately 13,000 feet and to bottom said well in the Devonian formation at a point approximately 300 feet east and 300 feet south of its surface location.

CASE 3828:

Application of W. M. Gallaway for a non-standard gas proration unit, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 197.77-acre non-standard gas proration unit comprising the S/2 of Section 18, Township 23 North, Range 3 West, Ballard-Pictured Cliffs Gas Pool, Rio Arriba County, New Mexico, said unit to be dedicated to applicant's Apache Well No. 1 located 835 feet from the South line and 875 feet from the East line of said Section 18.

T. P. State Well #1

Correct surface location seems
to be 1887.2 feet EL and

2126.4 FSL of Sec. 1 but

your request shows 2164 FSL

will this make a difference
in your bottom hole location.

$$\begin{array}{r} 2164 \\ 2126 \\ \hline 38 \end{array}$$

7-17-68
Mr. Jenkins of Tri State by
telephone OK'd 2126 FSL

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 7, 1968

EXAMINER HEARING

IN THE MATTER OF:

Application of Tri-Service Drilling Company) Case No. 3827
to directionally drill, Lea County,)
New Mexico.)

BEFORE: Elvis A. Utz
Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3827.

MR. HATCH: Case 3827. Application of Tri-Service Drilling Company to directionally drill, Lea County, New Mexico.

MR. LOSEE: A. J. Losee, Artesia, representing the Applicant, and I have one witness, Mr. Jenkins.

(Witness sworn.)

MR. UTZ: Are there any other appearances? You may proceed.

MR. LOSEE: If you will give us a second, we'll mark these exhibits, Mr. Examiner.

(Whereupon, Applicant's Exhibits Numbers 1 through 5 were marked for identification.)

WALTER D. JENKINS

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOSEE:

Q State your name, please?

A I'm Walter Jenkins.

Q Where do you live, Mr. Jenkins?

A Midland, Texas.

Q What is your occupation?

A I'm Production Superintendent for Tri-Service Drilling

Company.

Q Have you previously testified before the Oil Conservation Commission in New Mexico?

A I have.

Q Now, this is the application of Tri-Service Drilling Company to whipstock the T. P. Well Number 1. Would you explain to the Examiner what has transpired in the drilling of this well up to this date?

A J. C. Williamson originally drilled the well as is shown on Exhibit 1 and the surrounding acreage, and the well cut up fault slightly south and -- or west of the surface location and went on the downthrown side of the fault and was dry.

Subsequently, Signal Oil and Gas Company took over the well and elected to whipstock it and went east, or mostly east, a little bit north, and recovered oil and water on drill-stem test of the Devonian, approximately 500 feet east of the surface location.

Since then, Tri-Service Drilling Company has assumed operations and we want to attempt to go south and east, approximately 330 feet south and 330 feet -- or 300 feet south and east of the surface location in an attempt to establish up dip strike in to a southerly direction and effect a commercial completion in

the development.

Q Please refer to what has been marked as Exhibit 1.

A Exhibit 1 shows, is just a surface ownership plat showing the location of the well and the acreage which is committed to this, or is on farmout to Tri-Service Drilling Company for Devonian rights in this area.

It's approximately four, five miles south of the nearest Devonian production in the Medicine Rock Field.

Q And the acreage is colored in yellow or surrounded in yellow?

A Yes.

Q Actually, Tri-Service Drilling Company has been the drilling contractor on all of these operations, has it not?

A Yes.

Q Please refer to what has been marked as Applicant's Exhibit 2 and explain what is portrayed by this exhibit.

A Exhibit 2 is simply a survey plat showing the surface location and the bottom of the original hole or the J. C. Williamson hole and the top of the Devonian of minus 9381 as it shows on the plat to the southeast. Then the Signal whipstock is shown to the north and east and is designated "Signal."

And then we show our proposed bottom hole location to the south and the east which would be Location 1826 from the south and 1587 from the east of the section line. And, again, that's

where we're aiming. It could be 100 feet either way or 50 feet either way from this proposed bottom hole location.

Q Now this plat is actually of the southeast quarter of the southeast quarter of Section 1 in Township 16 South, Range 38 East.

A Yes.

Q It shows it to be 160 acres. Is Section 1 in this township irregular in size?

A It's an irregular section. You'd have to refer back to Exhibit 1 to see that is a non-standard section, but the southeast quarter is a standard 160.

Now, that section has got eight or 900 acres in it and then they got regular south of there. The northern sections of that township are long ones.

Q Please refer to what has been marked Exhibit 3, your structure map and explain what is reflected by this exhibit.

A Well, this exhibit shows the wells that have been drilled in the area, both to the east and and to the west and showing the top of the Devonian, subsea top of the Devonian, and this proposed structure map, as shown, has been extrapolated from seismic data and what we are attempting to do is to prove strike up dip in a southerly direction and establish that the oil field is to the south, rather where we were, and that's our only purpose in whipstocking the well.

Signal has -- we crossed the fault and you'll see we had a minus 9381 on the top of the Devonian, so we whipstocked it and got away from the fault and got a 9275. And from seismic information, we feel that there is a high to the south and from -- it's just cheaper to start at 10,000 feet or 11,000 feet, rather than dig that much hole if we can establish a strike to the south, up dip, we'll drill additional wells in the area.

Q How did you establish or determine the existence of this fault?

A Well, I have an electric log --

Q Why don't you just explain what it is.

A -- on the top of the Devonian, and we cut a repeat section in the Mississippian, which is indicated from electric logs that we cut the same section twice, so we went on the downthrown side of the fault to the southwest location.

MR. UTZ: Cut it in the Mississippian?

THE WITNESS: In between the -- You have an area on both sides of the fault. It's not succinctly defined as being one foot, but it tears up the beds on both sides for, I would hesitate to say exactly how far, twenty to thirty feet, but from about 11,005 to 12,006, we were in a faulted zone. And to pick the exact point of the fault would be a little bit difficult other than log interpretation indicates that we did repeat the section, the same section, twice.

MR. UTZ: That section was in the Mississippian?

THE WITNESS: It was in the Mississippian, between the Chester and the Mississippian.

Q Please refer to what's been marked as Exhibit 4, a schematic diagram of this well as it exists and as it is proposed and explain what is portrayed.

A Well, the color scheme, the yellow is the cement, the surface pipe, intermediate, and then where the first hole went and where it crossed the fault and got on the downthrown side; the hole to your right is portrayed as the Signal Well, which just-- it got oil and water on a drillstem test, got to the edge of the Devonian, and I say the one down through the middle we intended or we hope will be the Devonian and we'll get it high enough to effect a commercial completion.

Q Now, actually, this is -- to give a proper perspective, it ought to be three dimensional.

A I can't show three dimensional on one piece of paper. But as I say, the first hole went to the left and crossed the fault, and then Signal went to the right and we hope to go down the middle. It's actually -- Well, I can't show the three dimensional, anyway.

MR. UTZ: In connection with your Exhibit Number 2, I think it shows it pretty well.

Q What was the drillstem on this Signal hole?

A We cut the top seven feet of the Devonian and got 60 feet of oil and a little bit of drilling mud, so we cut 15 more feet and got 1,000 feet of oil and 4,000 feet of salt water, so we just hope we're close.

Q Please refer to what has been marked as Exhibit 5, the directional survey and explain the important points of this.

A The first survey was -- They were both run by Eastman and they are a point by point survey from the surface to total depth showing where the hole went and, again, I say the fault cannot be exactly defined, but it's in a -- if you will look at the graphical survey, it cut the fault. The first well cut the fault at a point at approximately Point Number 75, somewhere in that area, and this was the original survey on the first hole.

Q And this is the J. C. Williamson hole?

A This is the J. C. Williamson hole. Then Signal --

Q Excuse me. Before you leave that, how far was it from the surface location of the well?

A About 148.81 feet south and 75.58 feet west. Then Signal assumed operations to the well, again did a point by point survey, and if you'll look past each individual point giving coordinates and deviation, the hole corrects and et cetera, they got out of the old hole at, well, a point about Number 55 and whipstocked the well to the northeast to a location 596.55

feet east and 181.52 feet north.

Q Where do you propose to get out of the hole?

A Well, the original application and the letter accompanying the original application said that we were going to avoid "unditional" or unnecessary delay. We were going to go ahead and start this program at our own risk and we intended to do it at about 11,001 and we lost some tools in the hole at 12,001 and came back up to 10,005 and, as I told -- or yesterday morning, we were at 11,915 and had 151 feet of right hole cut at a direction south, 76 degrees east.

Q Now, where do you intend that your bottom hole location will be?

A Well, we will run a continuous directional survey by Eastman to determine where the bottom of the hole is every 50 or 100 feet from now until we reach our projected point of 300 feet south and east of the surface location. I mean, it will be done in the same manner that these Eastman previous -- these hole surveys were done.

Q So that, actually, your intended location would be 300 feet south and 300 feet east of the surface location --

A Yes.

Q -- which is 1587 feet from the east line and 1826 feet from the south line --

A Right.

Q -- as shown by your Exhibit 2?

A Yes.

Q In order to allow some tolerance, would you ask the Commission to give you a circle at that depth with a radius of 50 feet from that point, the circle with 100 feet in diameter?

A Well, definitely. It's a little bit hard to point them and land exactly where you want to. We're just trying to get in a general direction and then we will whipstock as necessary to approximate our recommended bottom hole location, but it's a little hard to hit right on the money.

Q And you will take these directional surveys as you drill an old well back?

A Yes, exactly as was done on the previous survey.

Q And if any additional survey is requested in coming out of the hole, point by point survey, if you made a well, Tri-State Service would be willing to do that?

A Yes.

Q Mr. Jenkins, were Exhibits 1 through 5 prepared by you or under your supervision?

A They were prepared by me, yes.

MR. LOSEE: I have no further testimony at this time.

MR. UTZ: Exhibits 1 through 5 will be entered into the record in this case.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were admitted in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Jenkins, if you miss your 50 foot circle, you're requesting, the only damage that would be done would be that you might be less than 330 feet from a quarter-quarter section line, is that correct?

A Well, from our acreage, I'd say it would be unfeasible that we'd land less than 1500 feet from the lease line.

Q In your opinion, this 50 feet is enough tolerance?

A I'm sure that 50 feet is sufficient.

MR. LOSEE: Now, you're speaking of, actually, a 100 foot circle with a 50 foot radius, are you not?

THE WITNESS: Yes.

MR. UTZ: Are there any questions of the witness? He may be excused. Case will be taken under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
WALTER D. JENKINS	
Direct Examination by Mr. Losee	2
Cross Examination by Mr. Utz	11

E X H I B I T S

<u>Number</u>	<u>Marked for Identification</u>	<u>Received in Evidence</u>
Applicant's Exhibits Numbers 1 through 5, inclusive.	2	11

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

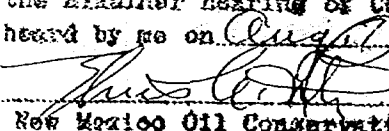
I, CHARLOTTE MACIAS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

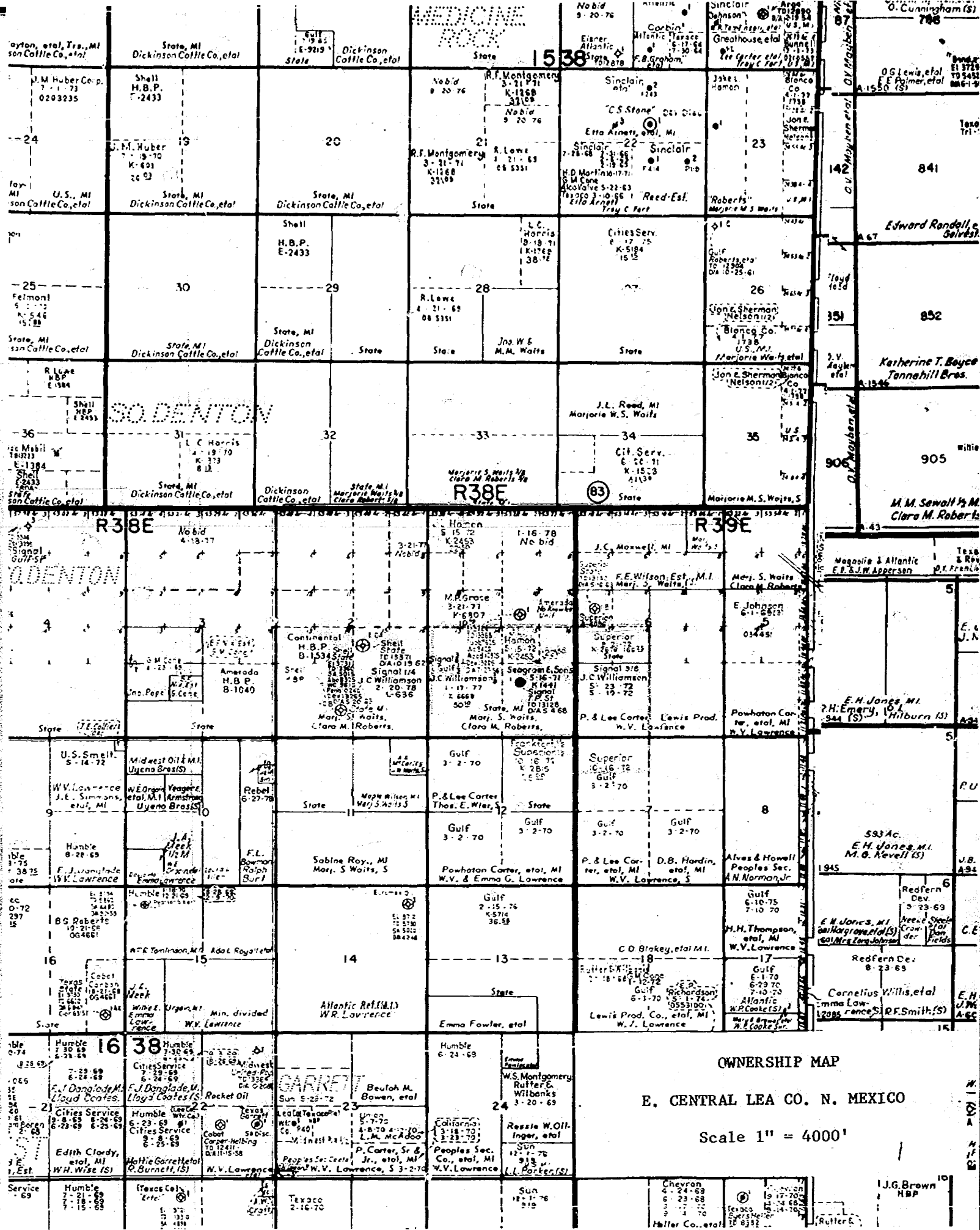
Witness my Hand and Seal this 22nd day of September, 1968.


Notary Public

My Commission Expires:

February 10, 1971.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2872, heard by me on August 1968.

Examiner
New Mexico Oil Conservation Commission



TRI - SERVICE

TRI - SERVICE DRILLING CO.

TRI - SERVICE

TRI-SERVICE

TRI-SERVICE

GULF

TEXAS PACIFIC OIL COMPANY

TRI - SERVICE

SURVEY PLAT

TRI - SERVICE DRILLING COMPANY

WELL NO. 1,
T.P. STATE LEASE

2126 FT FR SOUTH; 1887 FT FR EAST LINES (UNIT LETTER "R")
SECTION 1, T-16-S, R-38-E,
LEA COUNTY, NEW MEXICO

SCALE: 1" = 500'

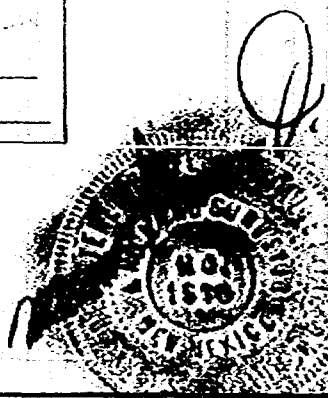
BEFORE EXAMINER UTZ

OIL COM. N. MEX. SEC. 1

Oppl EXHIBIT NO. 2

CASE NO. 3827

PREPARED AUGUST 5, 1948





"Symbol of Service"

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

SIGNAL OIL AND GAS COMPANY
COMPANY

T. P. STATE #1
WELL NAME

LEA COUNTY, NEW MEXICO
LOCATION

JOB NUMBER
WT2968

TYPE OF SURVEY
MULTIPLE SHOT
SURVEY

DATE
February 25, 1968

SURVEY BY
E. R. Warner

OFFICE
Odessa, Texas



RECORD OF SURVEY

JOB NO. WT2968

DATE February 25, 1968

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION	COURSE DEVIATION		DRIFT DIRECTION	ACCUMULATED DEVIATION							
									ASSUMED ONE DIRECTION							
1	276	30'				2	40		2	40						
2	557	15'				1	24		3	64						
3	838	VERT														
4	1121	VERT														
5	1403	VERT	1403													
6	1684	45'				3	68		7	32						
7	1961	15'				1	21		8	53						
8	2231	15'				1	18		9	71						
9	2509	15'				1	22		10	93						
10	2785	VERT	2784	97												
11	3060	VERT														
12	3340	1°				4	90		15	83						
13	3616	1°				4	83		20	66						
14	3895	1°				4	88		25	54						
15	4177	1°30'	4176	70		7	30		32	84						
16	4463	1°15'				6	23		39	07						
17	4644	45'				2	37		41	44						
18	4871	VERT	4870	62					41	44						



RECORD OF SURVEY

CHECKED BY _____

JOB NO. WT2968

DATE February 25, 1968

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION		COURSE DEVIATION		DRIFT DIRECTION	RECTANGULAR COORDINATES				
										NORTH	SOUTH	EAST	WEST	
1	5059	45'					2 46		N 34 E	2 04		1 38		
2	5153	45'					1 23		N 30 E	3 11		2 00		
3	5247	45'					1 23		N 48 E	3 93		2 91		
4	5340	45'					1 22		N 43 E	4 82		3 74		
5	5434	30'	5433	95			82		N 57 E	5 27		4 43		
6	5529	45'					1 24		N 64 E	5 81		5 54		
7	5622	45'					1 22		N 78 E	6 06		6 73		
8	5716	1°					1 65		S 89 E	6 93		8 38		
9	5811	1°					1 66		N 70 E	6 60		9 94		
10	5906	1°	5905	87			1 66		N 75 E	7 03		11 54		
11	6001	1°					1 66		N 64 E	7 76		13 03		
12	6094	1°					1 63		N 49 E	8 83		14 26		
13	6188	1°					1 65		N 66 E	9 50		15 77		
14	6282	1° 15'					2 05		N 74 E	10 06		17 74		
15	6377	1° 15'	6376	77			1 94		N 88 E	10 13		19 68		
16	6480	1° 15'					2 25		S 68 E	9 29		21 77		
17	6594	1°					2		S 80 E	8 94		23 74		
18	6689	1°					1 66		S 80 E	8 65		25 37		
19	6783	1°					1 65		S 77 E	8 28		26 98		
20	6875	1°	6874	67			1 61		S 78 E	7 95		28 55		



RECORD OF SURVEY

JOB NO. WT2968

DATE February 25, 1968

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION	COURSE DEVIATION		DRIFT DIRECTION	RECTANGULAR COORDINATES									
									NORTH		SOUTH		EAST		WEST			
21	6945	1°	7307	57		1	23	S 65 E	7	43			29	66				
22	7038	1°30'				2	44	S 78 E	6	92			32	05				
23	7121	1°30'				2	17	S 83 E	6	66			34	20				
24	7214	1°15'				2	03	S 84 E	6	45			36	22				
25	7308	1°15'				2	05	S 87 E	6	34			38	27				
26	7401	1°15'	7778	47		2	03	S 86 E	6	20			40	30				
27	7496	1°				1	66	S 85 E	6	06			41	95				
28	7591	1°15'				2	07	N 75 E	6	60			43	95				
29	7685	1°15'				2	05	N 80 E	6	96			45	97				
30	7779	1°15'				2	05	N 80 E	7	32			47	99				
31	7874	1°	8252	38		1	66	S 73 E	6	84			49	58				
32	7969	1°				1	66	S 73 E	6	36			51	17				
33	8065	45'				1	26	S 69 E	5	91			52	35				
34	8163	1°				1	72	S 26 E	4	36			53	10				
35	8253	1°				1	58	S 11 E	2	81			53	40				
36	8345	1°	8726	28		1	61	S 4 W	1	20			53	29				
37	8440	1°15'				2	07	S 10 E			84		53	65				
38	8557	1°15'				2	55	S 23 W			3	19	52	65				
39	8630	1°15'				1	59	S 20 W			4	68	52	11				
40	8727	1°30'				2	54	S 14 W			7	14	51	50				



RECORD OF SURVEY

JOB NO. WT2968

DATE February 25, 1968

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH		VERTICAL SECTION		COURSE DEVIATION		DRIFT DIRECTION	RECTANGULAR COORDINATES			
										NORTH	SOUTH	EAST	WEST
41	8820	1°30'	9209	89			2	44	S 15 W		9	50	50 87
42	8913	1°45'					2	84	S 15 W		12	24	50 14
43	9004	1°30'					2	38	S 18 W		14	50	49 40
44	9098	2°30'					4	10	S 20 W		18	35	48 00
45	9211	3°15'					6	41	S 22 W		24	29	45 60
46	9312	4°15'	9682	12			7	48	S 31 W		30	70	41 75
47	9407	5°30'					9	10	S 35 W		38	15	36 53
48	9495	5°15'					8	05	S 36 W		44	66	31 80
49	9590	5°15'					8	69	S 32 W		52	03	27 20
50	9685	4°30'					7	46	S 33 W		58	29	23 14
51	9779	4°30'	10152	82			7	38	S 34 W		64	41	19 01
52	9873	4°30'					7	38	S 31 W		70	74	15 21
53	9968	4°15'					7	04	S 36 W		76	44	11 07
54	10063	4°					6	63	S 39 W		81	59	6 90
55	10157	4°					6	56	S 40 W		86	61	2 68
56	10252	4°15'	10622	60			7	04	S 43 W		91	76	2 12
57	10347	4°30'					7	46	S 45 W		97	05	7 39
58	10440	4°					6	49	S 48 W		101	37	12 21
59	10535	4°					6	63	S 39 W		106	52	16 38
60	10628	4°					6	49	S 37 W		111	70	20 29



RECORD OF SURVEY

JOB NO. WT2968

DATE February 25, 1968

CHECKED BY:

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
61	10723	3°15'			5 39	S 36 W		116 06		23 46
62	10817	2°45'			4 51	S 37 W		119 66		26 17
63	10910	2°45'			4 46	S 41 W		123 03		29 10
64	11004	2°45'			4 51	S 49 W		125 99		32 50
65	11097	2°45'	11091	01	4 46	S 55 W		128 55		36 15
66	11191	2°45'			4 51	S 59 W		130 87		40 02
67	11286	2°30'			4 14	S 61 W		132 88		43 64
68	11364	1°45'			2 38	S 16 W		135 17		44 30
69	11459	2°30'			4 14	S 13 W		139 20		45 23
70	11569	2°30'	11562	57	4 80	S 15 W		143 84		46 47
71	11663	2°45'			4 51	S 74 W		145 08		50 81
72	11749	3°15'			4 88	S 85 W		145 51		55 67
73	11835	1°30'			2 25	S 80 W		145 90		57 89
74	11929	2°			3 28	S 87 W		147 07		61 17
75	12016	2°	12009	18	3 04	S 88 W		146 18		64 21
76	12136	2°			4 19	S 79 W		146 98		68 32
77	12207	2°			2 48	S 73 W		147 71		70 69
78	12302	2°			3 32	S 79 W		148 34		73 95
79	12412	1°15'			2 40	N 82 W		148 01		76 33
80	12506	1°	12498	97	1 65	N 55 W		147 06		77 68



RECORD OF SURVEY

CHECKED BY _____

JOB NO. WT2968

DATE February 25, 1968

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
81	12604	45'			1 28	N 87 W		146 99		78 96
82	12698	30'			82	S 51 E		147 51		78 32
83	12786	45'			1 15	S 58 E		148 12		77 34
84	12880	45'			1 23	S 87 E		148 18		76 11
85	12974	30'	12966 94		82	S 40 E		148 81		75 58
CLOSURE: 166 96' S 26° 56' W										



'Symbol of Service'

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

Signal Oil & Gas Company
COMPANY

T.P. State No. 1
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER
WT31068 - WT31168

TYPE OF SURVEY
Controlled Directional
Drilling

DATE
March 2, 1968

SURVEY BY
Bob Barker

OFFICE
Odessa, Texas

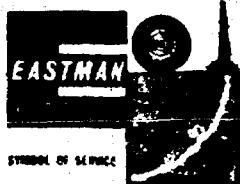


RECORD OF SURVEY

JOB NO. WT31068 - WT31168 DATE March 2, 1968

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
55	10157	4°	10,152 82							
56	10252	4°15'				S 43 W		91 76		2 12
57	10347	4°			6 63	S 53 W		95 75		7 41
58	10377	4°30'			2 35	S 40 W		97 55		8 93
59	10440	3°30'			3 85	S 04 W		101 39		9 20
60	10475	3°15'	10,470 08		1 98	S 10 W		103 34		8 86
61	10505	2°30'			1 31	S 26 E		104 52		8 28
62	10537	2°45'			1 54	S 26 E		105 91		7 60
63	10569	2°30'			1 40	S 53 E		106 25		6 48
64	10615	4°15'			3 41	S 44 E		109 20		4 12
65	10638	5°30'	10,632 74		2 20	S 42 E		110 84		2 65
66	10697	6°15'			6 42	S 70 E		113 03	3 39	
67	10728	6°15'			3 38	S 81 E		113 56	6 72	
68	10757	6°30'			3 28	S 87 E		113 73	10 00	
69	10789	6°45'			3 76	N 87 E		113 53	13 75	
70	10848	7°45'	10,841 25		7 96	N 81 E		112 29	21 61	
71	10878	8°15'			4 31	N 79 E		111 47	25 84	
72	10908	9°30'			4 95	N 73 E		110 02	30 57	
73	10940	10°15'			5 69	N 69 E		107 98	35 89	
74	10973	11°45'			6 72	N 67 E		105 35	42 08	
75	11004	12°45'	10,994 56		6 84	N 65 E		102 46	48 28	



RECORD OF SURVEY

JOB NOWT31068-WT31168 DATE March 2, 1968

CHECKED BY _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
76	11035	13°45'			7 37	N 63 E		99 11	54 85	
77	11067	15°15'			8 41	N 59 E		94 78	62 06	
78	11097	16°30'			8 52	N 57 E		90 14	69 21	
79	11144	18°45'			15 11	N 52 E		80 24	81 12	
80	11175	19°30'	11,128 80		10 35	N 52 E		74 47	89 28	
81	11207	19°45'			10 81	N 51 E		67 67	97 68	
82	11236	20°45'			10 27	N 51 E		61 21	105 65	
83	11273	21°			13 26	N 51 E		52 87	115 95	
84	11305	20°15'			11 08	N 53 E		46 20	124 80	
85	11337	20°15'	11,309 84		11 08	N 54 E		39 69	133 76	
86	11368	20°			10 60	N 56 E		33 76	142 55	
87	11432	18°45'			20 57	N 55 E		21 96	159 40	
88	11463	17°30'			9 32	N 55 E		16 41	167 03	
89	11491	16°30'			7 95	N 59 E		12 52	173 84	
90	11522	16°15'	11,485 74		8 67	N 63 E		8 58	181 56	
91	11553	15°15'			8 15	N 69 E		5 66	189 17	
92	11586	13°15'			7 56	N 77 E		3 96	196 54	
93	11618	12°			6 65	N 84 E		3 27	203 15	
94	11665	11°30'			9 37	N 82 E		1 97	212 43	
95	11697	9°30'	11,656 69		5 28	N 84 E		1 42	217 68	



RECORD OF SURVEY

JOB NO. WT31068-WT31168 DATE March 2, 1968

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STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
96	11738	8°45'			6 24	N 83 E		66	223 87	
97	11830	11°45'			18 73	N 75 E	19		241 96	
98	11924	14°15'			23 14	N 68 E	18 86		263 42	
99	11963	15°45'			10 58	N 67 E	16 99		273 16	
100	12042	17°45'	11,991 16		24 09	N 63 E	27 93		294 62	
101	12154	19°15'			36 93	N 60 E	46 40		326 60	
102	12272	18°45'			37 93	N 61 E	64 79		359 77	
103	12341	17°45'			21 04	N 63 E	74 34		378 56	
104	12427	18°30'			27 29	N 63 E	86 73		402 84	
105	12578	18°45'	12,498 88		48 53	N 63 E	108 76		446 08	
106	12795	17°30'			65 25	N 64 E	137 37		504 73	
107	12975	18°30'			57 11	N 63 E	163 30		555 62	
108	13120	18°	13,014 43		44 81	N 66 E	181 52		596 55	
			Closure 623.53' N 73° 5' East							